

Patent Abstracts of Japan

PUBLICATION NUMBER : 03189415
PUBLICATION DATE : 19-08-91

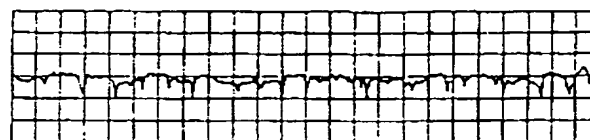
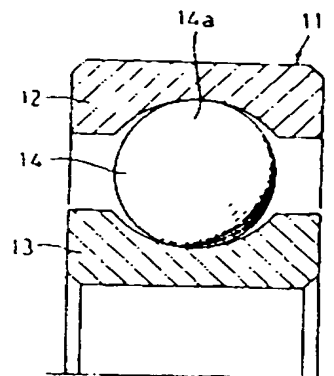
APPLICATION DATE : 20-12-89
APPLICATION NUMBER : 01330022

APPLICANT : NTN CORP;

INVENTOR : GOTO SHUNEI;

INT.CL. : F16C 33/32 F16H 7/12

TITLE : BALL BEARING FOR TENSION
PULLEY OR THE LIKE



x 1000
x 100

ABSTRACT : PURPOSE: To offer an advantage for forming an oil film on the surface of a rolling element and prevent the occurrence of an abnormal sound in a cold condition by randomly forming an infinite number of fine recesses on the surface of the rolling element and keeping the surface roughness parameter SK value thereof at -1 or less and the average area of the fine recesses at $80\mu\text{m}^2$ or less.

CONSTITUTION: A rolling element 14 built into a ball bearing 11, is so formed as to have a fine rough surface 14 with randomly formed fine recesses. The aforesaid rough surface 4a is set to a surface roughness parameter SK value of -1 or less, and the average area of fine recesses is set to $80\mu\text{m}^2$ or less to reduce the deterioration of the sound level of the ball bearing 11. The section of the rough surface 14a is so formed as to have a recess on a flat surface without any projection from the flat surface. In the ball bearing 11 formed in accordance with the aforesaid condition, the fine roughness acts as a lubricant stagnation position and as a bucket for replenishing a contact part with the lubricant. Consequently, a stable oil film can be obtained, thereby preventing the occurrence of an abnormal sound in a cold condition.

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